



# Melinda Denton

## Endowed Biology Seminar

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<http://edwardslab.org/>

### Rediscovering the organism in phylogenetic biology



**Monday, May 10, 2021**  
**12:00 GMT -7**

Phylogenetics has found its way into many different subdisciplines of biology, and has made lasting impacts in fields as disparate as community ecology and medicine. In evolutionary biology, the recent trend of phylogeny-oriented studies has been toward “scaling up”, and looking for very broad patterns in character evolution and diversification in attempts to make generalizations about the tempo and mode of evolution. This scaling up does come with a cost, in that we spend less time trying to understand how evolutionary processes work at the whole-organism level. We have a mind-boggling array of new ways to “look at” the organism, inspiring a return to the roots of phylogenetics: understanding in gory detail the relationships and organismal evolution of species in a model clade. I’ll talk about our past and ongoing work in the Portulacineae, focusing on the discovery of what we believe to be a genuinely new form of photosynthesis, and how phylogenetics can be integrated with new technologies in powerful ways